

**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**  
 (PCT Article 36 and Rule 70)

Applicant's or agent's file reference C02048WO	<b>FOR FURTHER ACTION</b>	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)
International application No. PCT/EP 03/12369	International filing date (day/month/year) 06.11.2003	Priority date (day/month/year) 08.11.2002
International Patent Classification (IPC) or both national classification and IPC C08G61/00		
Applicant COVION ORGANIC SEMICONDUCTORS GMBH et al.		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 4 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p>																								
<p>3. This report contains indications relating to the following items:</p> <table> <tr><td>I</td><td><input checked="" type="checkbox"/></td><td>Basis of the opinion</td></tr> <tr><td>II</td><td><input type="checkbox"/></td><td>Priority</td></tr> <tr><td>III</td><td><input type="checkbox"/></td><td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td></tr> <tr><td>IV</td><td><input type="checkbox"/></td><td>Lack of unity of invention</td></tr> <tr><td>V</td><td><input checked="" type="checkbox"/></td><td>Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td></tr> <tr><td>VI</td><td><input type="checkbox"/></td><td>Certain documents cited</td></tr> <tr><td>VII</td><td><input type="checkbox"/></td><td>Certain defects in the international application</td></tr> <tr><td>VIII</td><td><input type="checkbox"/></td><td>Certain observations on the international application</td></tr> </table>	I	<input checked="" type="checkbox"/>	Basis of the opinion	II	<input type="checkbox"/>	Priority	III	<input type="checkbox"/>	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	IV	<input type="checkbox"/>	Lack of unity of invention	V	<input checked="" type="checkbox"/>	Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	VI	<input type="checkbox"/>	Certain documents cited	VII	<input type="checkbox"/>	Certain defects in the international application	VIII	<input type="checkbox"/>	Certain observations on the international application
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Date of submission of the demand 08.06.2004	Date of completion of this report 02.03.2005
Name and mailing address of the International preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Marsitzky, D Telephone No. +49 89 2399-7275



INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT

International application No. PCT/EP 03/12369

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

1-32 as originally filed

**Claims, Numbers**

1-24 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
- the claims, Nos.:
- the drawings, sheets:

5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

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**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes: Claims	1-24
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-24
Industrial applicability (IA)	Yes: Claims	1-24
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP 03/12369

**1. Artikel 33 (2) PCT:**

**D1** offenbart Polytetraalkylenfluorene, deren Herstellung sowie Verwendung in OLEDs; **D2** beschreibt die Herstellung und Verwendung der entsprechenden PIF-Copolymere. **D3** und **D4** offenbaren Step-Ladder Polyfluorene mit steifen Aryl-Seitenketten. Da keines der Dokumente die PIF-Polymeren mit speziellen Seitenketten (Aryl-seitenketten oder gemischte Aryl-Alkylseitenketten) offenbart, ist der Gegenstand der Ansprüche 1-24 neu.

**2. Artikel 33 (3) PCT:**

Das Dokument D1 wird als nächster Stand der Technik betrachtet, da es ebenfalls Polyindenofluorene zur Benützung in OLEDs offenbart. Der Unterschied der vorliegenden Anmeldung zu D1 ist die Verwendung von speziellen Aryl-oder Heteroarylsubstituenten bzw. gemischten Aryl-Alkylseitenketten R1-R4. Da es aus den Dokumenten D3 und D4 jedoch bekannt ist, dass Arylseitenketten bei Polyfluoren zu verbesserten optischen Eigenschaften und Device-Performances in OLEDs führen und D1 die Verwandschaft von PF und PIF hervorhebt, ist der Gegenstand der Ansprüche 1-24 nicht erfinderisch.

**3. Artikel 6 PCT:**

Die Formulierung "without departing from the spirit and scope of the present invention..., p. 32" sollte gestrichen werden, um den Gegenstand des Schutzbegehrens zu limitieren.